



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/727,924 | 11/30/2000 | Joseph P. Odenwalder | PA010045 | 6384 |

23696 7590 11/25/2003

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

CORRIELUS, JEAN B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2631

DATE MAILED: 11/25/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/727,924

Applicant(s)

ODENWALDER ET AL.

Examiner

Jean B Corrielus

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11,12,15,16 and 21 is/are allowed.
- 6) ☒ Claim(s) 1-2,5, 7--10,13, 14,17-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 3,4 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2631

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Dahlman et al US patent No. 6,442,153 in view of Falk US Patent No. 6,430,167.

Dahlman et al discloses a method and apparatus having the steps of packeting a data payload into a packet see fig. 1; generating a preamble payload see fig. 2 corresponding to the packet see fig. 1; spreading the preamble payload to form a preamble unit see fig. 2. As noted in the applicant's response, filed on 10/16/03, page 3, Dahlman et al does not teach the step of repackaging a data payload into at least one subpacket. However, it is well known and well established in the art to repackage a data payload into at least one subpacket. For instance, Falk teaches in fig. 2 the repackaging of data packet 24 into one or more subpacket or cell 32. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Dahlman in order to place the data into a form compatible with the data network as taught by Falk see col. 5, lines 47-48.

As per claims 2 and 19, Dahlman teaches the step of sequencing the preamble unit see fig. 1.

Art Unit: 2631

3. Claims 13 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Quigley et al US Patent application Publication No. US 2001/0055319 A1.

Quigley et al discloses a method and apparatus having the steps of determining a data rate for a data payload see col. 21, lines 6-9; using a lookup table to determine a corresponding packet size for the payload data and a preamble length see fig. 69 (payload 118a includes both data (subpacket) and preamble attached to the data (subpacket) col. 36, paragraph 518.

4. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlman et al US patent No. 6,442,153 in view of Falk US Patent No. 6,430,167 and further in view of Yan et al US patent No. 6,553,011.

As applied to claim 1, Dahlman and Falk teach every feature of the claimed invention but does not teach that the preamble is spread using a plurality of orthogonal codes such as Walsh codes. In the same field of endeavor, Yan et al teaches the spreading of preamble using a series of orthogonal codes or Walsh codes see col. 4, lines 57-64. It would have been obvious to one skill in the art to incorporate such a teaching in Dahlman and Falk in order to distinguished between different base stations as taught by Yan see col. 4, lines 57-58.

Art Unit: 2631

5. Claims 5, 7, 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlman et al US patent No. 6,442,153 in view of Falk US Patent No. 6,430,167 and further in view of Kanterakis et al US patent No. 6,301,286.

As per claims 5, 7, 8 and 20, Dahlman Falk disclose the invention substantially as claimed but fail to teach the further limitations of encoding the preamble using a convolutional encoder/block code. In the same field of endeavor Kanterakis et al teaching the step of encoding the preamble. It would have been obvious to one skill in the art to incorporate such a teaching in Dahlman Falk so as to increase system immunity to noise and intersymbol interference.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Quigley et al in view of Jou Patent Application No. US 2002/0122398 A1.

As applied to claim 13 above, Quigley teaches every feature of the claimed invention but does not explicitly teach the use of a plurality of lookup tables each corresponding to a number of available Walsh codes. However, such limitations do not involve any inventive step. For instance, Jou teaches in fig.1 4A-C such limitation of the claim. Given that fact, It would have been obvious to one skill in the art at the time of the invention to incorporate the teaching of Jou in Quigley et al so as to enhance system performance.

Allowable Subject Matter

Art Unit: 2631

7. Claims 11, 12, 15, 16 and 21 are allowed.
8. Claims 3, 4, 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments filed 10/16/03 have been fully considered but they are not persuasive. It is alleged that there is no teaching in Dahlman of the sequencing of the preamble. Examiner disagrees. As shown in fig. 1 the preamble is placed in the sequence or in series with the data field. Applicant stated that Quigley et al does not teach subpackets or any equivalent thereof. (See applicant's comment, page 4, lines 13-14) However, in lines 18-19, applicant acknowledged that Quigley teaches that the packets are broken into "chunks" prior to any transmission. The **chunks** of packets, taught by Quigley, are equivalent to the claimed subpackets. It is further alleged that no basis for rejecting claim 18 was provided. Such argument is moot as claim 18 was rejected under section 102 in the previous office action(see second paragraph of the previous office action) and now is rejected under section 103 under Dahlman and Falk (see 2nd paragraph of this office action).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the

Art Unit: 2631

teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine was found in the knowledge generally available to one of ordinary skill in the art.

Conclusion

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

(for informal or draft communications, please label "PROPOSED" or
"DRAFT")

Art Unit: 2631

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).

11. Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Jean B. Corrielus whose telephone number is (703) 305-4023.

The examiner can normally be reached on Monday-Thursday from 7:00 A.M. to 5:30 P.M.

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Group receptionist whose telephone number is (703) 305-3800.


Jean B. Corrielus

Primary Examiner

TC-2600 11-22-03